

REMARKS:

In the foregoing amendments, claim 4 was amended to delete calcium and claims 2 and 6 were cancelled. Claims 1, 3-5, 7 and 8 remain in the application for consideration by the examiner. Applicant respectfully requests reconsideration and allowance of these claims for least the following reasons.

Claims 1-8 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,140,555 of Garcia *et al.* (Garcia). Applicant respectfully submits that the inventions defined in claims 1, 3-5, 7 and 8 are patently distinguishable from the teachings of Garcia within the meaning of 35 U.S.C. §102(b) or 35 U.S.C. §103(a) for at least the following reasons.

The teachings of Garcia at column 1, lines 30-42 require a carbide shape controller selected from 0.022 to 0.15% Mg, 0.005 to 0.1% Ca, and mixtures thereof. Present independent claim 1 does not include Mg and Ca. Present independent claim 4, as amended, does not include Ca and includes Mg completely outside the range required by Garcia; claims 2 and 6 were cancelled.

The Office Action stated that it would have been obvious to one of ordinary skill in the art at the time the invention was made to omit the Ca and/or Mg from the nickel-based alloy, as required by Garcia, where the oxidation, desulfurization, and fine grain size would not be required or desired, citing M.P.E.P. §2112.011. Applicants respectfully submit that this section of the M.P.E.P. does not support this position. There can be no reason within the teachings of Garcia to remove Mg from the alloy proposed therein. This is because Garcia requires Mg and/or Ca to form carbide particles and at grain boundaries. Therefore removal of these elements from Garcia would destroy the invention in Garcia and cannot be obvious. In particular, the teachings

of Garcia require the presence of the carbide shape controller that includes 0.022 to 0.15% Mg. See, for example, the discussions in Garcia at column 1, lines 30-55, column 3, lines 12-15, and column 4, lines 13-19, which explained that there must be at least 0.022% contained magnesium in the alloy to obtain carbides that are equi-axed (or blocky) in shape rather than a normal script-type shape found in regular alloys. At least for this reason, applicant respectfully submits that the teachings of Garcia teach away from the presently claimed inventions, and therefore cannot contemplate or suggest the inventions set forth in the present claims. *United States v. Adams*, 383 U.S. 39, 40 (1966); *KSR Int'l v. Teleflex Inc.*, 127 S. Ct. 1727, 1740-41, 82 USPQ2d 1385, 1396 (2007).

As explained repeatedly by USPTO Board of Appeals and Interferences and elsewhere in the case law, a reference cannot be properly modified if the effect would be to destroy the invention on which the referenced patent is based. *Ex parte Hartmann*, 186 USPQ 366 (P.T.O.Bd.Ap. 1974); *Ex parte Thompson*, 184 USPQ 558 (P.T.O.Bd.Ap. 1974). See also *In re Rosen* 213 USPQ 347 (CCPA) 1982; and *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999).

Based on the foregoing arguments, applicants submit that the present claim 1 is patently distinguishable from the teachings of Garcia. Independent claim 4 deletes any amount of calcium and includes Mg up to 0.01%. Garcia at column 5, lines 15-17 explains that the magnesium in the alloys shown in the table at the top of columns 5 and 6 therein can be supplemented or replaced by 0.005% to 0.010% calcium. The minimum amount of magnesium required in Garcia is 0.022%. Replacing this minimum amount of magnesium in Garcia with the maximum amount of calcium (0.010% for magnesium replacement) will result in 0.012% magnesium, which is

outside the range permitted in claim 4, and thus patently distinguishable from the teachings of Garcia.

Applicants further argue that the specification demonstrates that the presently claimed alloy satisfying the formula for  $\gamma/\gamma'$  -eutectoid of, by area percentage, 1-15%, has superior properties. The discussion in applicants' specification disclosure in the paragraph bridging pages 12 and 13 explains that by regulating the cooling rates after casting, the area percentages of  $\gamma/\gamma'$  -eutectoid can be adjusted. There is no teaching in Garcia concerning regulating the cooling rates or a relationship between cooling rates and the area percentages of  $\gamma/\gamma'$  -eutectoid. Applicants submit that one of ordinary skill in the art could not reasonably predict the area percentages of  $\gamma/\gamma'$  -eutectoid of 1-15% as presently claimed. For the same reason, the presently claimed area percentages of  $\gamma/\gamma'$  -eutectoid of 1-15% cannot be inherent or obvious within the teachings of Garcia.

At least for the foregoing reasons, applicants respectfully submit that the inventions defined in present claims 1, 3-5, 7 and 8 are patently distinguishable from the teachings of Garcia within the meaning of 35 U.S.C. §102 and/or 35 U.S.C. §103. Therefore, applicant respectfully requests that the examiner reconsider and withdraw any rejection of the present claims over these teachings as set forth in the outstanding Office action.

Based on the above, a formal allowance of claims 1, 3-5, 7 and 8 is respectfully requested. While it is believed that all the claims in this application are in condition for allowance, should the examiner have any comments or questions, it is respectfully requested that the undersigned be telephoned at the below listed number to resolve any outstanding issues.

In the event this paper is not timely filed, applicant hereby petitions for an appropriate extension of time. The fee therefor, as well as any other fees which become due, may be charged to our deposit account No. 50-1147.

Respectfully submitted,  
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